FACT SHEET FOR STATE WASTE DISCHARGE PERMIT ST 5081
SURFSIDE INN SEWAGE TREATMENT PLANT

11/15/2004

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INTRODUCTION

This fact sheet is a companion document to the draft State Waste Discharge Permit No. ST 5081. The Department of Ecology (Department) is proposing to issue this permit, which will allow discharge of wastewater to waters of the State of Washington. This fact sheet explains the nature of the proposed discharge, the Department's decisions on limiting the pollutants in the wastewater, and the regulatory and technical bases for those decisions.

Washington State law [Revised Code of Washington (RCW) 90.48.080 and 90.48.162] requires that a permit be issued before discharge of wastewater to waters of the state is allowed. Regulations adopted by the State include procedures for issuing permits [Chapter 173-216 Washington Administrative Code (WAC)], technical criteria for discharges from municipal wastewater treatment facilities (Chapter 173-221 WAC) and water quality criteria for ground waters (Chapter 173-200 WAC). They also establish the basis for effluent limitations and other requirements which are to be included in the permit.

This fact sheet and draft permit are available for review by interested persons as described in Appendix A--Public Involvement Information.

The fact sheet and draft permit have been reviewed by the Southwest Regional Office of the Washington State Department of Health and by the Permittee. Errors and omissions identified in these reviews have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. The fact sheet will not be revised. Changes to the permit will be addressed in Appendix D--Response to Comments.

GENERAL INFORMATION	
Applicant	Surfside Inn (World Mark), Surfside Homeowners Association, Joe McHugh, Louis Runge, John Kukula
Facility Name and Address	Surfside Inn STP
Type of Treatment System	Activated Sludge with sand filter
Discharge Location	Latitude: 46º 31' 51" N Longitude: 124º 03' 09" W.
Legal Description of Application Area	Latitude: 46° 31' 51" N. Longitude: 124° 03' 09" W.
Contact at Facility	Name: Title: Plant Superintendent Telephone #: (360) 665-5211
Responsible Officials	Name: Title: Onsite Resort Manager Surfside Condominium Complex (World Mark by Trendwest & Surfside Homeowners Association) Address: 31512 J. Place Ocean Park, WA 98640 Telephone #: (360)665-5211 FAX #: (360)665-5213

GENERAL INFORMATION	
	Name: Joe McHugh Title: Owner of wastewater plant Address: 4912 113th Street Long Beach, WA 98631 Telephone #: (503) 791-0956 John Kukula Title: Owner of STP drainfield 31508 J Place Ocean Park, WA 98640-5207 Telephone #: (360) 665-4148 Mike Elson, Director of Resort Operations, Worldmark, Chairman of Board of Directors, Surfside Homeowners Association #705-828 Howe St. Vancouver, B.C. V6Z 2X2 Telephone #: (604) 669-3512 MikeE@trendwestresorts.com

BACKGROUND INFORMATION

DESCRIPTION OF THE COLLECTION AND TREATMENT SYSTEM

HISTORY

The Surfside Inn Wastewater Treatment Plant was installed in 1977-78. The plant consists of a steel package activated sludge plant [Clow Corporation (now Purestream)] with tertiary filtration, chlorine disinfection, and land disposal via a two drainfields. The plant at that time served only the Surfside Inn Condominium Complex. A restaurant which was connected to the system burned down and has not been rebuilt. The Condominium consists of 42 one bedroom units and 6 two bedroom units. The wastewater treatment plant is privately owned by a private investor and is operated by Worldmark.

Originally there was a proposal to build a second condominium structure north of the present one, but that was never built. Pacific County has apparently approved a plat of over a dozen homes that are to be served by this wastewater facility. To date, only one residence has been build and occupied.

The investor who owns the treatment plant has sold land containing portions of the drainfield to other investors who planned to develop the property. In 2003, the Department sent letters to Pacific County and the owner of the land with a portion of the drainfield informing them that any modification to the wastewater treatment facilities without submittal of an Engineering Report and written approval by the Department were prohibited under chapters 173-240 WAC and RCW 90.48.110. It was noted that any unapproved activities would result in an immediate action order to stop work under RCW 90.48.120(2).

COLLECTION SYSTEM STATUS

The main collection system consists of approximately 500 feet of 8-inch concrete gravity sewer pipe and two manholes. It was built at the time of the treatment plant installation in 1977-78. The pipe is set on a 0.04 percent slope. There have been several attempts in the past to expand the service area with proposals which included: 1) another Condominium Complex, and 2) the Surfview Estates housing development. Lot 14 was the only part of Surfview Estates that has a house on it. Information was not available on the sewer pipe serving the single dwelling on lot 14. It would be logical to assume that the pipe to the dwelling starts at the most northerly manhole in line with the lot (manhole #2).

The condition of the existing collection system is unknown. This permit will require inspection, cleaning, and repair of the existing gravity collection system.

TREATMENT PROCESSES

The package activated sludge treatment plant was installed in 1977-78. The steel fabricated plant consists of the following unit processes:

Comminutor for grinding incoming solids (not functioning during the last site visit)

Surge tank with pump: 8,109 gallons

Aeration/mixing tank: 20,000 gallons

Secondary Clarifier with sludge return: 3,373 gallons

Chemical addition/floc tank: 2,500 gallons

Tertiary clarifier: 7,648 gallons

Chlorine contact tank: 1,800 gallons

Sand filter with clearwell: 3,958 gallons

Pumped discharge tank: 969 gallons

Two drainfields with a total capacity of 40,000 gallons/day

There was no information on Infiltration and Inflow (I/I) rehabilitation in the files. Based on flow records, the plant does not experience unusually high flows due to I/I. The flows do come up a modest amount in the winter and also respond to the higher tenant population.

DISTRIBUTION SYSTEM (DRAINFIELD)

The plant effluent is pumped to two drain fields located under large parking lot areas to the north and to the east of Surfside Inn Condominium complex.

The access ports and vents for the existing drainfield are paved or concreted over. This permit will require that the access ports and vents be reestablished and that the drainfield be inspected by a qualified contractor.

Overall System Status

The plant and plant building are in various stages of deterioration and disrepair. For example, nearly the entire original control system has been scrapped. Pumps and blowers have not been maintained adequately. Backup pumps and blowers are not serviceable and therefore the plant does not meet redundancy requirements. Ingress and egress to the plant has been constricted by overgrown bushes. Operation and inspection of the facility is dangerous due to lack of lighting and trip hazards from garbage and debris which litter the floor. The laboratory floor has rotted through and has a hole in it. Distribution boxes and vents in the drainfield have been removed, filled-in or abandoned. There is no clear plan of operation of the drainfield or any evidence that flow control structures have been inspected or maintained.

The state of repair of the facility appears to be related to the fractionated ownership of the treatment plant, collection system and drainfield. The owner and operators do not agree on who is to pay for which repairs and as a consequence, the system has been neglected. This neglect has compromised the systems ability to adequately treat wastewater and protect groundwater. It should be noted that shallow ground water is used as water supply in the vicinity of the facility and therefore lapses in adequate treatment may result in a public health threat.

This permit will require most parts of the collection, treatment and disposal system be evaluated and repaired, replaced, or upgraded to ensure permit requirements are met. These items are broken down into to groups: immediate repairs required under S9 and items to be addressed in an engineering report required under S4B. Further sewer service connections will be limited (S10) until such time as the repairs identified pursuant to Sections S4.B and S9 are completed and accepted by the Department in writing.

Further the Department has included all parties that own or operate the facility as Permittees. Failure to comply with the terms of the permit may result in enforcement action against all Permittees. The Department's primary concern is that the plant is operated and maintained in such a way as to ensure that permit conditions are consistently met and that public and environmental health are protected.

RESIDUAL SOLIDS

There are not grit and screenings removal devices at this treatment facility. Incidental solids (rags, scum, and other debris) are removed as part of the routine sludge hauling by Evergreen Septic once per quarter. The solids are disposed of at a site in Oregon.

GROUND WATER

The drainfield is situated over an unconfined sand aquifer that is used for public water supply. The water table is shallow. The existing monitoring network consists of two water-supply wells designated as Well #1 and Well #2. Nitrate has been observed in the wells; the maximum nitrate concentration observed was 8.5 mg/L in October 2002. Special conditions for upgrading the monitoring network are described in this permit.

PERMIT STATUS

The previous permit for this facility was issued on September 26, 1978.

An application for permit renewal was submitted to the Department on December 12, 2001, and accepted by the Department on February 26, 2002.

SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

A formal documented compliance inspection without sampling was conducted on December 16, 1998. Several site visits have been made since that time including on March 28, 2000, and April 26, 2004.

During the history of the previous permit, the Permittee has been out of compliance from time to time based on Discharge Monitoring Reports (DMRs) and other reports submitted to the Department and inspections conducted by the Department.

WASTEWATER CHARACTERIZATION

The concentration of pollutants in the discharge was reported in the permit application and in discharge monitoring reports. The proposed wastewater discharge prior to infiltration or land application is characterized for the following parameters:

Table 1: Wastewater Characterization

Parameter	Monthly Average Concentration
BOD_5	9.4
Total Suspended Solids	4.1
Total Ammonia, as N	5.6
Total Nitrate, as N	8.2
Total Nitrite, as N	0.9

PROPOSED PERMIT LIMITATIONS

State regulations require that limitations set forth in a waste discharge permit must be either technology- or water quality-based. Wastewater must be treated using all known, available, and reasonable treatment (AKART) and not pollute the waters of the state. The minimum requirements to demonstrate compliance

with the AKART standards are derived from the *Water Reclamation and Reuse Standards*, the *Design Criteria for Municipal Wastewater Land Treatment*, and Chapter 173-221 WAC.

The permit also includes limitations on the quantity and quality of the wastewater applied to the drainfield that have been determined to protect the quality of the ground water. The approved engineering report includes specific design criteria for this facility. Water quality-based limitations are based upon compliance with the Ground Water Quality Standards (Chapter 173-200 WAC).

The more stringent of the water quality-based or technology-based limits are applied to each of the parameters of concern. Each of these types of limits is described in more detail below.

TECHNOLOGY-BASED EFFLUENT LIMITATIONS

All waste discharge permits issued by the Department must specify conditions requiring available and reasonable methods of prevention, control, and treatment of discharges to waters of the state (WAC 173-216-110). The following permit limitations are necessary to satisfy the requirement for AKART:

GROUND WATER QUALITY-BASED EFFLUENT LIMITATIONS

In order to protect existing water quality and preserve the designated beneficial uses of Washington's ground waters including the protection of human health, WAC 173-200-100 states that waste discharge permits shall be conditioned in such a manner as to authorize only activities that will not cause violations of the Ground Water Quality Standards. The goal of the ground water quality standards is to maintain the highest quality of the state's ground waters and to protect existing and future beneficial uses of the ground water through the reduction or elimination of the discharge of contaminants to ground water [WAC 173-200-010(4)]. This goal is achieved by [GW Implementation Guidance, Abstract, page x]:

1. Requiring that AKART (all known available and reasonable methods of prevention, control and treatment) be applied to any discharge;

2. Application of the antidegradation policy of the ground water quality standards. This policy mandates protecting background water quality and preventing degradation of water quality which would harm a beneficial use or violate the ground water standards; and

3. Establishing numeric and narrative criteria for the protection of human health and welfare in the ground water quality standards.

Numeric ground water criteria (maximum contaminate concentrations) are based on drinking water quality criteria. Applicable criteria concentrations are listed below:

Ground Water Quality Criteria

Total Dissolved Solids	500 mg/L
Chloride	250 mg/L
Total Coliform Bacteria	1 CFU/100mL
Sulfate	250 mg/L
Nitrate (as N)	10 mg/L
pH	6.5 to 8.5 standard units
Manganese	0.05 mg/L

Total Iron	0.3 mg/L
Toxics	No toxics in toxic amounts

The Department has reviewed existing records and is unable to determine if background ground water quality is either higher or lower than the criteria given in Chapter 173-200 WAC; therefore, the Department will use the criteria expressed in the regulation in the proposed permit. The discharges authorized by this proposed permit are not expected to interfere with beneficial uses. The Permittee is required in Section S8 of the proposed permit to determine background concentrations in ground water. This information may result in a permit modification of limits after two years of data are available. When this data is available, the Department may modify the permit to include groundwater and effluent limitations which consider background concentrations in groundwater.

COMPARISON OF LIMITATIONS WITH THE EXISTING PERMIT ISSUED SEPTEMBER 26, 1978

Table 2: Comparison of Previous and New Limits

Parameter	Existing Limits	Proposed Limits
Biochemical Oxygen Demand, 5 day (BOD_5)	20 mg/L, 3.3 lbs/day	20 mg/L, 3.3 lbs/day
Total Suspended Solids (TSS)	20 mg/L, 3.3 lbs/day	20 mg/L, 3.3 lbs/day
Total Nitrogen, as N (*TKN+NO_3+NO_2)	10 mg/L, 1.7 lbs/day	10 mg/L, 1.7 lbs/day
Fecal Coliform bacteria	200/100 ml	200/100 ml
pH	6.0 <= pH <= 9.0	6.0 <= pH <= 9.0
Total Chlorine Residual (TCR)	0.5 < TCR < 1.0 mg/L	0.5 < TCR < 1.0 mg/L
*TKN=organic nitrogen + ammonia (NH_3-N)		

MONITORING REQUIREMENTS

Monitoring, recording, and reporting are specified to verify that the treatment process is functioning correctly, that ground water criteria are not violated, and that effluent limitations are being achieved (WAC 173-216-110).

INFLUENT AND EFFLUENT MONITORING

The monitoring and testing schedule is detailed in the proposed permit under Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

GROUND WATER MONITORING

The monitoring of ground water at the site is required in accordance with the Ground Water Quality Standards, Chapter 173-200 WAC and is detailed in the proposed permit under Condition S2. The Department has determined that this discharge has a potential to pollute the ground water. Therefore the Permittee is required to evaluate the impacts on ground water quality. Monitoring of the ground water at the site boundaries and within the site is an integral component of such an evaluation.

OTHER PERMIT CONDITIONS

REPORTING AND RECORDKEEPING

The conditions of S3 are based on the authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges (WAC 273-216-110).

FACILITY LOADING

The design criteria for this treatment facility are taken from an October 18, 1995, letter from James J. Jaeger, P.E. of Jaeger Engineering to Darrel Anderson, Municipal Unit Supervisor of Southwest Regional Office, the Department, and are as follows:

Monthly average flow (max. month):	0.02 mgd
Monthly average flow (max. month, tertiary portion of plant only)	0.05 mgd
Effluent Pump	0.072 mgd
Drainfield Capacity (Unconfirmed)	0.04 mgd

The permit requires the Permittee to maintain adequate capacity to treat the flows and waste loading to the treatment plant (WAC 173-216-110[4]). The Permittee is required to submit an engineering report when the plant reaches 85 percent of its flow or loading capacity. For significant new discharges, the permit requires a new application and an engineering report (WAC 173-216-110[5]).

OPERATIONS AND MAINTENANCE

The proposed permit contains Condition S.5 as authorized under RCW 90.48.110, WAC 173-220-150, Chapter 173-230 WAC, and WAC 173-240-080. It is included to ensure proper operation and regular maintenance of equipment, and to ensure that adequate safeguards are taken so that constructed facilities are used to their optimum potential in terms of pollutant capture and treatment.

RESIDUAL SOLIDS HANDLING

To prevent water pollution the Permittee is required in permit Condition S6 to store and handle all residual solids (grit, screenings, scum, sludge, and other solid waste) in accordance with the requirements of RCW 90.48.080 and State Water Quality Standards.

The final use and disposal of sewage sludge from this facility is regulated by U.S. EPA under 40 CFR 503. The disposal of other solid waste is under the jurisdiction of the local health district.

Requirements for monitoring sewage sludge and recordkeeping are included in this permit. This information will by used by the Department to develop or update local limits and is also required under 40 CFR 503.

PRETREATMENT

WAC 173-216-110 requires that the list of prohibitions in WAC 173-216-060 be included in the permit.

GENERAL CONDITIONS

General Conditions are based directly on state laws and regulations and have been standardized for all industrial waste discharge to ground water permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to submit written notice of significant increases in the amount or nature of discharges (typically new industrial discharges) into the sewer system tributary to the permitted facility. Condition G6 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G7 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Condition G8 requires application for permit renewal 60 days prior to the expiration of the permit. Condition G9 requires the payment of permit fees. Condition G10 describes the penalties for violating permit conditions.

RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limitations and conditions believed necessary to control toxics, and to protect human health and the beneficial uses of waters of the state of Washington. The Department proposes that the permit be issued for five years.

REFERENCES FOR TEXT AND APPENDICES

Faulkner, S.P., Patrick Jr., W.H., Gambrell, R.P., May-June, 1989. Field Techniques for Measuring Wetland Soil Parameters, Soil Science Society of America Journal, Vol. 53, No.3.

Washington State Department of Ecology, 1993. Guidelines for Preparation of Engineering Reports for Industrial Wastewater Land Application Systems, Ecology Publication # 93-36. 20 pp.

Washington State Department of Ecology and Department of Health, 1997. Water Reclamation and Reuse Standards, Ecology Publication # 97-23. 73 pp.

Washington State Department of Ecology, 1996. Implementation Guidance for the Ground Water Quality Standards, Ecology Publication # 96-02.

Washington State University, November, 1981. Laboratory Procedures - Soil Testing Laboratory. 38 pp.

APPENDICES

APPENDIX A--PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to issue a permit to the applicant listed on page one of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on July 16, 2003, and July 24, 2003, in the *Chinook Observer* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on September 29, 2004, in the *Chinook Observer* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Carey Cholski
Municipal Permit Administrator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the 30-day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least 30 days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing.

Comments should reference specific text followed by proposed modification or concern when possible. Comments may address technical issues, accuracy and completeness of information, the scope of the facility's proposed coverage, adequacy of environmental protection, permit conditions, or any other concern that would result from issuance of this permit.

The Department will consider all comments received within 30 days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (360) 407-6319, or by writing to the address listed above.

This permit was written by Al Bolinger, P.E.

APPENDIX B--GLOSSARY

Ambient Water Quality--The existing environmental condition of the water in a receiving water body.

Ammonia--Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Average Monthly Discharge Limitation--The average of the measured values obtained over a calendar month's time.

Best Management Practices (BMPs)--Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD_5--Determining the Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD_5 is used in modeling to measure the reduction of dissolved oxygen in a receiving water after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass--The intentional diversion of waste streams from any portion of the collection or treatment facility.

Chlorine--Chlorine is used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Compliance Inspection - Without Sampling--A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance Inspection - With Sampling--A site visit to accomplish the purpose of a Compliance Inspection - Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.

Composite Sample--A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite"(collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.

Construction Activity--Clearing, grading, excavation and any other activity which disturbs the surface of the land. Such activities may include road building, construction of residential houses, office buildings, or industrial buildings, and demolition activity.

Continuous Monitoring –Uninterrupted, unless otherwise noted in the permit.

Distribution Uniformity--The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

Engineering Report--A document, signed by a professional licensed engineer, which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal Coliform Bacteria--Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab Sample--A single sample or measurement taken at a specific time or over as short period of time as is feasible.

Industrial Wastewater--Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated storm water and, also, leachate from solid waste facilities.

Maximum Daily Discharge Limitation--The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is calculated as the average measurement of the pollutant over the day.

Method Detection Level (MDL)--The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.

pH--The pH of a liquid measures its acidity or alkalinity. A pH of 7 is defined as neutral, and large variations above or below this value are considered harmful to most aquatic life.

Quantitation Level (QL)-- A calculated value five times the MDL (method detection level).

Soil Scientist--An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5,3,or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

State Waters--Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater--That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a storm water drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based Effluent Limit--A permit limit that is based on the ability of a treatment method to reduce the pollutant.

Total Coliform Bacteria--A microbiological test which detects and enumerates the total coliform group of bacteria in water samples.

Total Dissolved Solids--That portion of total solids in water or wastewater that passes through a specific filter.

Total Suspended Solids (TSS)--Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Water Quality-based Effluent Limit--A limit on the concentration of an effluent parameter that is intended to prevent pollution of the receiving water.

APPENDIX C--TECHNICAL CALCULATIONS

APPENDIX D--RESPONSE TO COMMENTS

Comments were received on October 6, 2004, from Carroll Family Rev. Lv. Trust, G. Alton & Martha Carroll, Trustees.

Comment:

> This letter is to register our objection to Surfside Inn Condominiums Permit No. ST 5081, published 9/29/04 – Legal #790 to discharge their wastewater from their treatment plant onto the ground.
>
> This draft permit did not specify exactly what ground area this wastewater was to be discharged upon. However, based on the location of this sewer treatment facility, it appears that it would be discharged upon the Surfside Golf Course grounds.
>
> Our Residence is situated on the Southside of the 1st fairway and only a few hundred feet from this sewer facility. We feel any discharge of human wastewater could pose a health hazard, possibly offensive odors and certainly would devalue our home should any of these objections occur.

Response:

> The treatment plant does not discharge to the golf course. It has been discharging beneath the Condominium Complex parking lot since the late 70s or early 80s. We will have the Permittees do an extensive groundwater study to determine whether or not the groundwater is in jeopardy from discharge of this existing facility to the ground.